

# VTF 2006

VIA Technology Forum

Emerging Technology Trends

IPTV



*Embracing  
Digital Intelligence*

## International Scenario of IPTV Solutions

- **IPTV is viewed by many futuristic technologists as the sunrise industry of the world in the infotainment sector.**
- **Broadband services are being eyed as the main source of future revenue in the technology market.**
- **Multimedia content delivery networks are also gearing up to dive into this deep market.**
- **Experts predict the market to be worth Trillions of US \$.**
- **Expected to be a huge world market by 2007.**
- **Major multinationals, Telcos, Media houses etc. are making plans to venture into the business and secure their stakes.**

## Need of the World Market

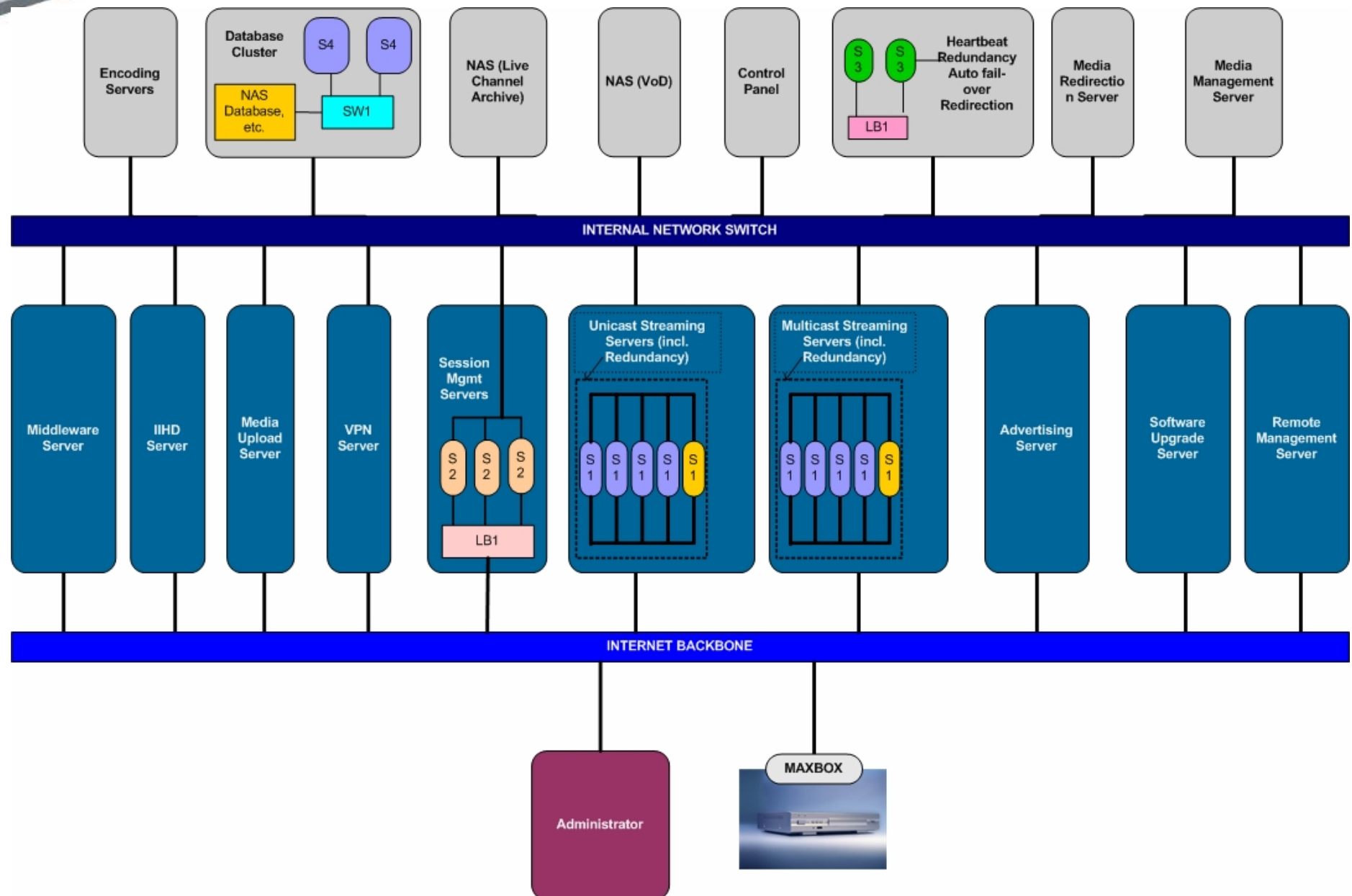
- **In order to deliver Multimedia on Broadband, service providers will need end-to-end solution to generate & deliver Multimedia content as well as Access Device at Customer-end to receive and display the content on television.**
- **It has to be an assured multi-directionally scalable product.**
- **The product has to be a CUSTOMER'S DELIGHT, AN INVESTOR'S DREAM AND A GLOBAL FANTASY!**

## Requirements for Broadband Multimedia Services

**IPTV and Broadband multimedia services require a complex set of multiplexed technologies – Presently Catered by a consortium setup or Partnering Companies having the following technologies:**

- **DVB Transcoding**
- **Encoding – Compression Technologies**
- **Video Streaming Servers – Unicast / Multicast**
- **Digital Rights Management (DRM)**
- **Multiple Specialized Media Servers**
- **Middleware**
- **And Importantly- The IP Set top Box**

# IPTV Deployment Architecture



## Making it Possible..... The IP Set Top Box

The IP Set top Box- Dedicated Single Unit  
Convergence

Even a computer can provide entertainment – Too  
formal and Individual Oriented Device.

“The Need of the Hour”

IP STB satisfies the Entertainment thirst of a family in  
their Living room using the most informal device at  
Home – The Television.

## Prime Business Drivers

- Excellent Broadband Infrastructure
- In US / Canada / Europe/ UK/ Australia – Many Channels, No Berth on Cable TV/ DTH Platform for channels with comparatively smaller audience for the reason of huge opportunity cost and smaller penetrations – But very High Demand; Large Expatriate population; excellent affordability – A desire to stay in touch with Native Lands
- The conventional DVD Rental – Courier services or Large distances – The demand for "*Instant Entertainment*" never satisfied.



- Video under 1Mbps - Near to Satellite/ DVD Quality can be streamed on MPEG-4/ H.264
- Platform for Multi-level service Operators to market new services for exponential subscriber growth.
- Europe : Using IPTV for Rural Development : Projects funded by Government Bodies for services such as
  - Civic Messages
  - Collection of Data
  - Taxation
  - Rural Awareness etc.



## Prime Business Opportunities

With a broadband-enabled network and the TV as a display device, a number of broadband Multimedia services can be possible:

- **Broadcast or Multicast TV: TV-centric applications**
- **Video on Demand: a Unicast service that enables a subscriber to order a movie at any time**
- **Pay-Per-View/Near Video on Demand (NVoD): these premium broadcast channels are billed per event**
- **Internet services: In addition to PC-based high speed Internet services, email and web access are also available on the TV**

## Prime Business Opportunities

- **T-Commerce/value-added services: such as gaming, T-commerce for impulse purchasing while watching the TV and gambling**
- **Horse Racing**
- **Closed Members Group Entertainment**
- **Karaoke**
- **Financial Services for Stock Trading and Portfolio Management**

## IPTV Business Segments

**Market is divided into three major Business Segments:**

- I. TELCOS / ISP**
- II. IPTV on Public Internet Networks**
- III. HOSPITALITY**

## Salient Features of each Business Segment

## TELCOS / ISPs

- ❑ They have their own cable/optical/ ADSL networks.
- ❑ Huge infrastructure set-ups.
- ❑ Presently loosing revenues in voice business.
- ❑ Mostly owned by Public/ Govt. sectors.
- ❑ Almost all of them have pumped in huge investments to upgrade to ADSL.
- ❑ Internet surfing/ E-mails or Data transfers are not sufficient for pay backs.

## IPTV on Public Internet Networks

- ❑ This is an unexplored virgin market which is not being catered by anybody today.
- ❑ Presently the Content is streamed on Personal Computers (PCs) through Public Internet Network.
- ❑ Personal Computers do not provide a home environment experience due to uncomfortable streaming structures.
- ❑ Conventionally, the comfort is in operating a 'Lean back' (remote control) as against a 'Laid back' (computer key board).
- ❑ The lacunae of bulky operating environments that are prone to get stalled/hung or infected by virus takes away the lean back comfort.

## HOSPITALITY

- ❑ This industry has been conventionally using age old methods for providing Live Channels and Video On Demand.
- ❑ In most of the countries and in various hotel chains; a 3<sup>rd</sup> party hospitality service provider has been investing in the infrastructure for accessing media.
- ❑ Such 3<sup>rd</sup> party service providers work with the hotel on a revenue sharing basis.
- ❑ Hotel generally views this as a 3<sup>rd</sup> party investment and the Service provider on his part delays the investment unless pushed hard.
- ❑ Hotels are more prone to invest in enhancing the appearance of the hotel and the facilities that are prominently visible.



## Business Opportunities

## TELCOS / ISPs

- Multimedia would be the major business driver for TELCOS & ISPs.
- This shall be achieved by a good quality VOD, Live Channels and other value added services for their pay back of huge infrastructural investments.
- Many TELCOs / ISPs are already in deliberation with IPTV solution providers.
- Multiple trials have failed for want of accountable single window solution.
- Those on the verge of finalizing IPTV partners are still in search of comfort level in terms of accountability & flexibility.

## IPTV on Public Internet Networks

- **IPTV on Public networks are easy to deploy but technically very complex.**
- **Major enablers in this segment are the Content providers/ Media Houses/ Content aggregators / Local TV Channels etc who do not own any network but are still interested in the business.**
- **High end NOC ( Network Operating Centre) can be set-up in a data centre of any ISP/ TELCO having good peering arrangement with other operators in that territory including that of the last mile operators.**
- **As long as sufficient bandwidth is available at the subscriber-end, STBs can be distributed irrespective of any network/ state/ country.**
- **The streaming of Live channels/VOD in Unicast mode will make the system network independent as IGMP-2 protocol is being blocked in the Public Network.**
- **In most of the countries the price of bandwidth per subscriber is falling day by day making it an extremely profitable business model.**

## IPTV on Public Internet Networks

- **Clients interested in this business :-**
  - Local TV Channels.
  - Popular Cable/Satellite Networks dictate their terms so, even media houses/local channels having niche content do not find berth on such cable/ satellite networks either due to the unviable cost factor or less number of subscribers.
  - Expatriates who have migrated far away from their native countries have an urge to remain connected with their roots but the local cable operators cannot do justice to all channels of all nationalities.

## IPTV on Public Internet Networks

- **In IPTV, technology has enough room to accommodate any number of channels without limitation.**
- **Not all channels can afford to hire Multiple Satellite Transponders to cater to Multiple Time Zone customers and hence, IPTV becomes the cost effective savior.**
- **These are the people having investment capacities in the range of 1 to 100 million US \$.**
- **Can be termed as Small or Medium Enterprises (SMEs).**
- **Governed by single decision makers hence, cracking a deal is easy.**
- **The aggregated projections of this segment looks equal to or even bigger than the TELCOS and ISPs.**

## HOSPITALITY

- There are two types of Hotels. The ones that are independent and the others who are catered by the Hospitality Service provider.
- Efforts need to be put in to convince the Hotel Chains that the IPTV solution is actually a **VALUE ENHANCER** for the Hotel Industry and not just a tool for entertainment.
- Hotel chains should be so convinced that they either take the decision themselves or instigate their service providers to invest.
- **Hospitality Solution** needs to be propagated as a Complete Hospitality Management Solution along with being a Sophisticated Class of Entertainment Solution as well.
- Globally the guest requests are at the mercy of man power availability and added to that is the language barrier, here comes the multi-lingual interactive solution to their rescue.
- In this industry the decision makers are limited in numbers and therefore cracking the deals are comparatively easier.
- Profit margins on per room basis is very high.

## IPTV - “NO” Limitation Media

**IPTV and Broadband Multimedia Services  
crosses the limitations of the Cable & Satellite  
Medium**

***“PRACTICALLY NO LIMIT”* for Television/ Video  
Content**

**If the Infrastructure is updated – The  
Robustness of IP is the Robustness of this  
platform**